

CLAIMS

1/ Method for decoding Variable Length Codes used to encode data having a predefined type, preferably image or video data, said encoded data
5 consisting in a sequence of codewords belonging to a predefined set of codewords, said method comprising the steps of:

- building at least one partial decoded codeword sequence comprising at least two decoded codewords;
- checking if said partial decoded codeword sequence fulfils at least one
10 property intrinsic to said predefined type of data.

2/ Method according to claim 1, wherein said encoded data are transmitted over an air interface in a wireless communication network.

15 3/ Method according to claim 1, wherein partial decoded codeword sequences are iteratively obtained by adding at each iteration an additional plausible codeword, the number of partial decoded codeword sequences at each iteration being equal to the number of additional plausible codewords which can be decoded, and wherein the method comprises the steps of:

- computing a metric for each obtained partial decoded codeword sequence; said metric giving an information on the meaningfulness of a sequence of data of said predefined type having a predefined bit length;
- said property intrinsic to said predefined type of data consisting in keeping only the partial decoded codeword sequence of said predefined bit length, herein called survivor of bit length L, optimising said metric for the next iteration.

4/ Method according to claim 3, further comprising the steps of:

- determining an information related to the number of pixels coded in said survivor of bit length L;
- keeping at least one additional partial decoded codeword sequence, having the same bit length as said survivor of bit length L, for which said information related to the number of pixel coded in said partial decoded sequence is lower than said corresponding information for said survivor of bit length L.

5/ Method according to claim 3, further comprising the steps of:

- computing a likelihood for each bit of said partial decoded codeword sequence kept for next iteration, herein called survivor, as a function of partial decoded codeword sequences having the same bit length as said survivor;
- generating a soft decoding output as a function of said likelihood.

- 6/ Method according to claim 1, wherein said data are image or video data, said at least one property intrinsic to image or video data consisting in checking if for a partial decoded codeword sequence having a bit length smaller or equal to the number of pixels per data blocks, noted N,

$$\sum_{\text{codewords} \in \text{partial sequence}} \text{run}_{\text{codeword}} + 1 \leq N,$$

wherein said parameter "run" is related to the number of pixels coded in a codeword.

- 5 7/ Method according to claim 1, wherein said data are image or video data, said at least one property intrinsic to image or video data consisting in checking if
 - for a partial decoded codeword sequence having a bit length smaller than the number of pixels per data blocks, an indicator of the end of block
 - 10 equals 0
 - and
 - for a partial decoded codeword sequence of bit length equal to the number of pixels per data blocks, an indicator of the end of block equals 1.
- 15 8/ Method according to claims 6, further comprising the step of discarding said partial decoded codeword sequence if said property is not verified.
- 9/ Receiver for receiving data encoded with a Variable Length Code, said receiver comprising:
 - 20 - means for building at least one partial decoded codeword sequence comprising at least two decoded codewords;
 - means for checking if said partial decoded codeword sequence fulfils at least one property intrinsic to said predefined type of data.